



Issuance Date: October 6, 2010
Effective Date: November 1, 2010
Expiration Date: October 31, 2015

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WASTE DISCHARGE PERMIT NO. WA0037087**

State of Washington
DEPARTMENT OF ECOLOGY
Olympia, Washington 98504-7775

In compliance with the provisions of
The State of Washington Water Pollution Control Law
Chapter 90.48 Revised Code of Washington
and
The Federal Water Pollution Control Act
(The Clean Water Act)
Title 33 United States Code, Section 1251 et seq.

City of Tacoma
2201 Portland Avenue
Tacoma, WA 98421

Plant Location:
City of Tacoma Treatment Plant #1
2201 Portland Avenue
Tacoma, WA 98421

Receiving Water:
Commencement Bay, Puget Sound

Water Body I.D. No.:
1224819475188

Discharge Location:
Latitude: 47.27825 N
Longitude: -122.42183 W

Plant Type:
Secondary – Activated Sludge (Pure Oxygen)
with sodium hypochlorite disinfection

is authorized to discharge in accordance with the special and general conditions that follow.

Garin Schrieve, P.E.
Southwest Regional Manager
Water Quality Program
Washington State Department of Ecology

TABLE OF CONTENTS

SUMMARY OF PERMIT REPORT SUBMITTALS.....	4
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SPECIAL CONDITIONS

S1. DISCHARGE LIMITS	6
A. Effluent Limits	
B. Peak Wet Weather Flow Treatment System Report	
C. Mixing Zone Authorization	
S2. MONITORING REQUIREMENTS	9
A. Monitoring Schedule ⁽¹⁾	
B. Sampling and Analytical Procedures	
C. Flow Measurement	
D. Laboratory Accreditation	
S3. REPORTING AND RECORDKEEPING REQUIREMENTS	13
A. Reporting	
B. Records Retention	
C. Recording of Results	
D. Additional Monitoring by the Permittee	
E. Reporting Permit Violations	
F. Other Reporting	
G. Maintaining a Copy of This Permit	
S4. FACILITY LOADING	17
A. Design Criteria	
B. Plans for Maintaining Adequate Capacity	
C. Duty to Mitigate	
D. Notification of New or Altered Sources	
E. Infiltration and Inflow Evaluation	
F. Wasteload Assessment	
S5. OPERATION AND MAINTENANCE	18
A. Certified Operator	
B. O & M Program	
C. Short-term Reduction	
D. Electrical Power Failure	
E. Prevent Connection of Inflow	
F. Bypass Procedures	
G. Operations and Maintenance Manual	
S6. PRETREATMENT	22
A. General Requirements	
B. Monitoring Requirements	
C. Reporting of Monitoring Results	

D.	Local Limit Development	
S7.	RESIDUAL SOLIDS.....	27
S8.	ACUTE TOXICITY	27
	A. Effluent Limit for Acute Toxicity	
	B. Monitoring for Compliance With an Effluent Limit for Acute Toxicity	
	C. Response to Noncompliance With an Effluent Limit for Acute Toxicity	
	D. Sampling and Reporting Requirements	
S9.	CHRONIC TOXICITY.....	30
	A. Testing When There Is No Permit Limit for Chronic Toxicity	
	B. Sampling and Reporting Requirements	
S10.	SANITARY SEWER OVERFLOW ELIMINATION PROGRAM	32
S11.	OUTFALL EVALUATION	32
GENERAL CONDITIONS		
G1.	SIGNATORY REQUIREMENTS.....	34
G2.	RIGHT OF INSPECTION AND ENTRY	34
G3.	PERMIT ACTIONS.....	35
G4.	REPORTING A CAUSE FOR MODIFICATION	36
G5.	PLAN REVIEW REQUIRED	36
G6.	COMPLIANCE WITH OTHER LAWS AND STATUTES.....	36
G7.	DUTY TO REAPPLY	36
G9.	REDUCED PRODUCTION FOR COMPLIANCE	37
G10.	REMOVED SUBSTANCES	37
G11.	DUTY TO PROVIDE INFORMATION.....	37
G12.	OTHER REQUIREMENTS OF 40 CFR.....	38
G13.	ADDITIONAL MONITORING.....	38
G14.	PAYMENT OF FEES.....	38
G15.	PENALTIES FOR VIOLATING PERMIT CONDITIONS	38
G16.	UPSET	38
G17.	PROPERTY RIGHTS.....	39
G18.	DUTY TO COMPLY	39
G19.	TOXIC POLLUTANTS.....	39
G20.	PENALTIES FOR TAMPERING	39
G21.	REPORTING PLANNED CHANGES.....	39
G22.	REPORTING ANTICIPATED NON-COMPLIANCE.....	39
G23.	REPORTING OTHER INFORMATION.....	40
G24.	COMPLIANCE SCHEDULES	40

SUMMARY OF PERMIT REPORT SUBMITTALS

Refer to the Special and General Conditions of this permit for additional submittal requirements.

Permit Section	Submittal	Frequency	First Submittal Date
S1.B.	Peak Wet Weather Flow Treatment System Report	Once	June 30, 2014
S1.B.	Annual Peak Wet Weather Flow Treatment System Progress Report	Annually	June 30 th if a flow blending event occurred in the previous calendar year
S3.	Discharge Monitoring Report	Monthly	December 15, 2010
S3.E	Reporting Permit Violations	As necessary	
S4.B.	Plans for Maintaining Adequate Capacity	As necessary	
S4.C.	Notification of New or Altered Sources	As necessary	
S4.E.	Infiltration and Inflow Evaluation	Annually	March 15, 2011
S4.F.	Wasteload Assessment	Annually	March 15, 2011
S5.G.	Operations and Maintenance Manual	1/permit cycle	July 30, 2012
S5.G.	Operations and Maintenance Manual Update or Review Confirmation Letter	Annually	July 30, 2013
S5.G.	Operations and Maintenance Manual Update	As necessary	
S6.A.5.	Pretreatment Report	Annually	March 15, 2011
S8.B.	Acute Toxicity Compliance Monitoring Reports	Quarterly	December 15, 2010
S8.C	Acute Toxicity: "Causes and Preventative Measures for Transient Events."	As necessary	
S8.C	Acute Toxicity TI/TRE Plan	As necessary	
S9.A	Chronic Toxicity Effluent Characterization with Permit Renewal Application	2/permit cycle if there is no permit limit for chronic toxicity	Conduct test in July 2014 & January 2015; Submit results with renewal application May 1, 2015
S10.	Sanitary Sewer Overflow Elimination Progress Report	Annually	March 15, 2011
S11.	Outfall Evaluation	1/permit cycle	December 15, 2014
G1.	Notice of Change in Authorization	as necessary	
G4.	Reporting a Cause for Modification	As necessary	

Permit Section	Submittal	Frequency	First Submittal Date
G5.	Engineering Report for Construction or Modification Activities	As necessary	
G7.	Application for Permit Renewal	1/permit cycle	May 1, 2015
G21.	Notice of Planned Changes	As necessary	
G22.	Reporting Anticipated Non-compliance	As necessary	
G23.	Reporting Other Information	As necessary	

SPECIAL CONDITIONS

S1. DISCHARGE LIMITS

A. Effluent Limits

All discharges and activities authorized by this permit shall be consistent with the terms and conditions of this permit. The discharge of any of the following pollutants more frequently than, or at a level in excess of, that identified and authorized by this permit shall constitute a violation of the terms and conditions of this permit.

Beginning on the effective date of this permit and lasting through the expiration date, the Permittee may discharge municipal wastewater at the permitted location subject to compliance with the following limitations:

	EFFLUENT LIMITATIONS ^a : OUTFALL # 001	
Parameter	Average Monthly ^a	Average Weekly ^b
Biochemical Oxygen Demand (5 day)	30 mg/L; 15,012 lbs/day 85% removal of influent BOD	45 mg/L; 22,518 lbs/day
Total Suspended Solids	30 mg/L; 15,012 lbs/day 85% removal of influent TSS	45 mg/L; 22,518 lbs/day
Fecal Coliform Bacteria ^c	200 cfu/100 mL	400 cfu/100 mL
pH ^d	Daily minimum is equal to or greater than 6.0 and the daily maximum is less than or equal to 9.0	
Parameter	Average Monthly ^a	Maximum Daily ^e
Total Residual Chlorine	0.109 mg/L	0.286 mg/L
Acute Toxicity	No acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).	
Flow Blending ^f	Flow splitting and blending shall only be allowed to occur when the hourly flow to the headworks equals or exceeds 60 MGD ^g .	
^a Average monthly effluent limit means the highest allowable average of daily discharges over a calendar month. To calculate the discharge value to compare to the limit, you add the value of each daily discharge measured during a calendar month and divide this sum by the total number of daily discharges measured. See footnote c for fecal coliform calculations. The average monthly effluent concentration for BOD ₅ and Total Suspended Solids shall not exceed 30 mg/L or 15 percent of the respective monthly average influent concentrations, whichever is more stringent. Headworks loadings received from other NPDES permitted facilities or internal return flows shall not be included in the calculation to determine compliance with minimum removal requirements.		
^b Average weekly discharge limitation means the highest allowable average of “daily discharges” over a calendar week, calculated as the sum of all “daily discharges” measured during a calendar week divided by the number of “daily discharges” measured during that week. See footnote c for fecal coliform calculations.		

<p>^c To calculate the average monthly and average weekly values for fecal coliforms you must use the geometric mean. Ecology gives directions to calculate this value in publication No. 04-10-020, <i>Information Manual for Treatment Plant Operators</i> available at: http://www.ecy.wa.gov/pubs/0410020.pdf</p>
<p>^d Indicates the range of permitted values. The Permittee must report the instantaneous maximum and minimum pH monthly. Do not average pH values.</p>
<p>^e Maximum daily effluent limit means the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limits expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units of measurement, the daily discharge is the average measurement of the pollutant over the day. This does not apply to pH.</p>
<p>^f For the purposes of this permit, flow blending is defined as the intentional routing of high, wet-weather flows around the biological secondary treatment system, treatment of such flows through the peak flow treatment system and recombination of these flows with those from the biological secondary treatment system for disinfection and discharge through the outfall. All flows blended in this manner are subject to the same effluent limitations as flows from the biological secondary treatment system.</p>
<p>^g During the manufacturer warranty period, the Permittee may operate the Actiflo peak wet weather treatment (PWWT) system:</p> <ul style="list-style-type: none"> • when hourly flows are greater than 60 MGD; and • once per month at hourly flows less than 60 MGD for a maximum period of three hours for each operation. <p>After the warranty period had expired, the Permittee may operate the PWWT system:</p> <ul style="list-style-type: none"> • when hourly flows are greater than 60 MGD; and • twice a year at hourly flows less than 60 mgd for a maximum period of three hours for each operation to test the functionality and proper operation of the system. <p>The Permittee must exercise caution during these events so that all effluent limitations are met and there are no permit violations.</p> <p>Termination of a flow blending event: When a flow blending event has started at 60 MGD, the Permittee may continue to operate the PWWT system for at least three hours. For events greater than three hours, the Permittee may operate the PWWT system until the hourly flow at the headworks is 55 MGD if all effluent limitations are met.</p>

B. Peak Wet Weather Flow Treatment System Report

The Permittee shall also prepare annual progress reports and submit to Ecology by **June 30th** of each year if a flow blending event occurred during the previous calendar year.

The annual progress report shall contain information on: total and soluble BOD₅ removal, TSS removal, and priority pollutant metals removal, on a concentration and total mass basis for the peak wet weather flow treatment system and the conventional secondary treatment system while flow blending. The report shall compare the acute and chronic toxicity results of final blended flow with the acute and chronic toxicity results of the final effluent when flow blending was not occurring.

By **June 30, 2014**, the Permittee shall submit a peak wet weather flow treatment system report to the Department of Ecology (Ecology). The peak wet weather flow treatment system report shall include: monthly and annual total mass loadings to the receiving water for BOD₅, TSS, and priority metals; the performance of the peak wet weather flow treatment system and the conventional secondary treatment system; and the frequency and magnitude (volume) of sanitary sewer overflows due to wet weather. The report shall compare results with similar peak flow periods before and after the peak wet weather flow treatment system was installed.

C. Mixing Zone Authorization

The following paragraphs define the maximum boundaries of the mixing zones:

MIXING ZONE FOR OUTFALL No. 001

Chronic Mixing Zone

WAC 173-201A-400(7)(b)(i) specifies mixing zones in an estuary must not extend in any horizontal direction from the discharge ports for a distance greater than 200 feet plus the depth of water over the discharge ports as measured during mean lower low water (MLLW). Given a MLLW water depth of 110 feet (33.5 meters) for the Permittee's outfall, the horizontal distance therefore is 310 feet (94.5 meters). The mixing zone is a circle with radius of 310 feet (94.5 meters) measured from the center of each discharge port. The outfall diffuser is 290 feet (88.4 meters) long and it has 30 discharge ports spaced 10 feet apart. The mixing zone extends from the seabed to the top of the water surface. Chronic aquatic life criteria and human health criteria must be met at the edge of the chronic zone.

Acute Mixing Zone

WAC 173-201A-400(8)(b) specifies that in estuarine waters a zone where acute criteria may be exceeded must not extend beyond 10 percent of the distance established for the maximum or chronic zone as measured independently from the discharge ports. The acute mixing zone is a circle with radius of 31.0 feet (9.4 meters) measured from the center of each discharge port. The outfall diffuser is 290 feet (88.4 meters) long and it has 30 discharge ports spaced 10 feet apart. The mixing zone extends from the seabed to the top of the water surface. Acute aquatic life criteria must be met at the edge of the acute zone.

Available Dilution (dilution factor)	
Acute Aquatic Life Criteria	22
Chronic Aquatic Life Criteria	145
Human Health Criteria - Carcinogen	186
Human Health Criteria - Non-carcinogen	145

S2. MONITORING REQUIREMENTS

A. Monitoring Schedule¹

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Wastewater Influent	Flow	MGD	Continuous ²	Record daily totalizer
Wastewater Influent	BOD ₅	mg/L lbs/day	3/week; and daily while flow blending	24-hour flow weighted composite
Wastewater Influent	TSS	mg/L lbs/day	4/week; and daily while flow blending	24-hour flow weighted composite
Wastewater Influent	Total Ammonia as N	mg/L	Monthly	24-hour flow weighted composite
Wastewater Influent	Nitrate + Nitrite as N	mg/L	Monthly	24-hour flow weighted composite
Wastewater Influent	Total Kjeldahl Nitrogen (TKN) as N	mg/L	Monthly	24-hour flow weighted composite
Wastewater Influent	Ortho-phosphate (PO ₄) as P	mg/L	Monthly	24-hour flow weighted composite
Wastewater Influent	Total Phosphorus as P	mg/L	Monthly	24-hour flow weighted composite
Wastewater Influent	Oil & Grease, Cyanide, and Total Phenols	mg/L	Quarterly ³	Grab
Wastewater Influent	Priority Pollutant Metals (See S6.B)	mg/L	Quarterly ³	24-hour flow weighted composite
Wastewater Influent	Priority Pollutant Organics (See S6.B)	mg/L	Yearly ⁴	24-hour flow weighted composite
Wastewater Effluent	Flow	MGD	Continuous ²	Record daily totalizer
Wastewater Effluent	Temperature	°C	Daily	Grab/meter
Wastewater Effluent	BOD ₅	mg/L lbs/day	3/week; and daily while flow blending	24-hour flow weighted composite
Wastewater Effluent	TSS	mg/L lbs/day	4/week; and daily while flow blending	24-hour flow weighted composite

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Wastewater Effluent	Fecal Coliform	cfu/100ml	Daily; and at least three per event ⁵ while flow blending	Grab
Wastewater Effluent	pH	Standard Units	Daily; and at least three per event ⁵ while flow blending	Grab
Wastewater Effluent	Total Residual Chlorine	mg/L	Daily; and at least three per event ⁵ while flow blending	Grab
Wastewater Effluent	Total Ammonia as N	mg/L	1/week; and at least three per event ⁽⁵⁾ while flow blending	Grab or 24-hour flow weighted composite
Wastewater Effluent	Nitrate + Nitrite as N	mg/L	Monthly	24-hour flow weighted composite
Wastewater Effluent	Total Kjeldahl Nitrogen (TKN) as N	mg/L	Monthly	24-hour flow weighted composite
Wastewater Effluent	Ortho-phosphate (PO ₄) as P	mg/L	Monthly	24-hour flow weighted composite
Wastewater Effluent	Total Phosphorus as P	mg/L	Monthly	24-hour flow weighted composite
Wastewater Effluent	Dissolved Oxygen	mg/L	Daily; and at least three per event ⁵ while flow blending	Grab
Wastewater Effluent	Oil & Grease, Cyanide, and Total Phenols	mg/L	Quarterly ³	Grab
Wastewater Effluent	Priority Pollutant Metals (See S6.B)	mg/L	Quarterly ³ ; and once per year while flow blending	24-hour flow weighted composite
Wastewater Effluent	Priority Pollutant Organics (See S6.B)	mg/L	Yearly ⁴ ; and once per year while flow blending	24-hour flow weighted composite
Biosolids	Cyanide, and Total Phenols	mg/Kg	Quarterly ³	Grab
Biosolids	Priority Pollutant Metals (See S6.B)	mg/Kg	Quarterly ³	Grab

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
Biosolids	Priority Pollutant Organics (See S6.B)	mg/Kg	Yearly ⁴	Grab
Wastewater Effluent	Acute Toxicity Compliance Monitoring		Quarterly ³ ; and once per year while flow blending	24-hour flow weighted composite
Wastewater Effluent	Chronic Toxicity Screening Test		2/permit (see S9.A); and once per year while flow blending	24-hour flow weighted composite
Blended Final Effluent	Total Flow	MGD	once for each flow blending event ⁶	Calculate
Blended Final Effluent	Duration of Discharge	Hours	Once for each flow blending event ⁶	Calculate
Peak Flow Treatment System Effluent	Flow	MGD	Once for each flow blending event ⁶	Calculate
Peak Flow Treatment System Effluent	BOD ₅	mg/L lbs	Once for each flow blending event ⁶	Flow weighted composite samples
Peak Flow Treatment System Effluent	Soluble BOD ₅	mg/L lbs	Once for each flow blending event ⁶	Flow weighted composite samples
Peak Flow Treatment System Effluent	TSS	mg/L lbs	Once for each flow blending event ⁶	Flow weighted composite samples

¹ For all monitoring, the Permittee shall use methods that can achieve a method detection level (MDL) equal to 0.1 times the effluent limitation or the most sensitive EPA approved method (see Appendix A), whichever is greater. If the analytical result for any sample is below the MDL, the Permittee shall report “less than {numeric MDL}” on the DMR. For purposes of averaging results, the Permittee shall use actual values for all values above the MDL and zero for values below the MDL.

² Continuous means uninterrupted except for brief lengths of time for calibration, for power failure, or for unanticipated equipment repair or maintenance. Sampling shall be taken every four hours when continuous monitoring is not possible.

Category	Parameter	Units	Minimum Sampling Frequency	Sample Type
³ Quarterly is defined as: January through March – First Quarter (report within 45 days following monitoring) April through June – Second Quarter (report within 45 days following monitoring) July through September – Third Quarter (report within 45 days following monitoring) October through December – Fourth Quarter (report within 45 days following monitoring)				
⁴ Yearly is defined as calendar year January through December (report within 45 days following monitoring)				
⁵ A minimum of three samples shall be collected during each flow blending event, a sample shall be taken at the beginning, middle, and end of the discharge. If the duration of a flow blending event is less than three hours, the Permittee may collect two samples (one at the beginning and another near the end of the discharge). If more than one sample per day is collected the daily value reported is the arithmetic average of the results from the individual tests except for pH, which shall be reported as maximum or minimum. The individual results from a flow blending event along with the flow at the time each sample was collected, and the date and time each sample was collected, shall be reported on a separate sheet and submitted with the DMR.				
⁶ The total volume of flow and the date and time of the start and termination of each flow blending event shall be reported on a separate sheet and submitted with the DMR.				

B. Sampling and Analytical Procedures

Samples and measurements taken to meet the requirements of this permit shall be representative of the volume and nature of the monitored parameters, including representative sampling of any unusual discharge or discharge condition, including bypasses, upsets, and maintenance-related conditions affecting effluent quality.

Sampling and analytical methods used to meet the monitoring requirements specified in this permit shall conform to the latest revision of the *Guidelines Establishing Test Procedures for the Analysis of Pollutants* contained in 40 Code of Federal Regulations (CFR) Part 136 or to the latest approved revision of *Standard Methods for the Examination of Water and Wastewater* (APHA), unless otherwise specified in this permit or approved in writing by Ecology.

C. Flow Measurement

Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the quantity of monitored flows. The devices shall be installed, calibrated, and maintained to ensure that the accuracy of the measurements is consistent with the accepted industry standard for that type of device. Frequency of calibration shall be in conformance with manufacturer's recommendations and at a minimum frequency of at least one calibration per year. Calibration records shall be maintained for at least three years.

D. Laboratory Accreditation

All monitoring data required by Ecology shall be prepared by a laboratory registered or accredited under the provisions of, *Accreditation of Environmental Laboratories*, Chapter 173-50 Washington Administrative Code (WAC). Flow, temperature, settleable solids, conductivity, pH, and internal process control parameters are exempt from this requirement. Conductivity and pH shall be accredited if the laboratory must otherwise be registered or accredited. Ecology exempts crops, soils, and hazardous waste data from this requirement pending accreditation of laboratories for analysis of these media.

S3. REPORTING AND RECORDKEEPING REQUIREMENTS

The Permittee must monitor and report in accordance with the following conditions. Falsification of information submitted to Ecology is a violation of the terms and conditions of this permit.

A. Reporting

The first monitoring period begins on the effective date of the permit. The Permittee must:

1. Submit monitoring results each month.
2. Summarize, report, and submit monitoring data obtained during each monitoring period on a Discharge Monitoring Report (DMR) form provided, or otherwise approved, by Ecology.
3. Submit DMR forms monthly whether or not the facility was discharging. If the facility did not discharge during a given monitoring period, submit the form as required with the words "NO DISCHARGE" entered in place of the monitoring results.
4. Ensure that DMR forms are postmarked or received by Ecology no later than the 15th day of the month following the completed monitoring period, unless otherwise specified in this permit.
5. Submit priority pollutant analysis data no later than forty-five (45) days following the monitoring.
6. Send report(s) to Ecology at:

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
P.O. Box 47775
Olympia, WA 98504-7775

All laboratory reports providing data for organic and metal parameters must include the following information: sampling date, sample location, date of analysis, parameter name, CAS number, analytical method/number, method detection limit (MDL), laboratory practical quantitation limit (PQL), reporting units, and concentration detected. Analytical

results from samples sent to a contract laboratory must include information on the chain of custody, the analytical method, QA/QC results, and documentation of accreditation for the parameter.

B. Records Retention

The Permittee must retain records of all monitoring information for a minimum of three years. Such information must include all calibration and maintenance records and all original recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit. The Permittee must extend this period of retention during the course of any unresolved litigation regarding the discharge of pollutants by the Permittee or when requested by Ecology.

C. Recording of Results

For each measurement or sample taken, the Permittee must record the following information:

1. The date, exact place, method, and time of sampling or measurement.
2. The individual who performed the sampling or measurement.
3. The dates the analyses were performed.
4. The individual who performed the analyses.
5. The analytical techniques or methods used.
6. The results of all analyses.

D. Additional Monitoring by the Permittee

If the Permittee monitors any pollutant more frequently than required by Condition S2 of this permit, then the Permittee must include the results of such monitoring in the calculation and reporting of the data submitted in the Permittee's DMR.

E. Reporting Permit Violations

The Permittee must take the following actions when it violates or is unable to comply with any permit condition:

- Immediately take action to stop, contain, and cleanup unauthorized discharges or otherwise stop the noncompliance and correct the problem.
- If applicable, immediately repeat sampling and analysis. Submit the results of any repeat sampling to Ecology within 30 days of sampling.

1. Immediate Reporting

The Permittee must report any failure of the disinfection system immediately to the Department of Ecology's Regional Office 24-hour number listed below:

Southwest Regional Office 360-407-6300

The Permittee must report any failure of the disinfection system, any collection system overflows which may reach surface waters or any plant bypass discharging to a shellfish area immediately to the Department of Ecology and the Department of Health, Shellfish Program at the numbers listed below:

Southwest Regional Office 360-407-6300

Department of Health, Shellfish Program 360-236-3330
(business hours)
360-786-4183
(24 hours)

2. Twenty-Four (24)-Hour Reporting

The Permittee must report the following occurrences of noncompliance by telephone, to Ecology at 360-407-6300, within 24 hours from the time the Permittee becomes aware of any of the following circumstances:

- a. Any noncompliance that may endanger health or the environment, unless previously reported under subpart 1, above.
- b. Any unanticipated **bypass** that exceeds any effluent limitation in the permit (See Part S4.B., "Bypass Procedures").
- c. Any **upset** that exceeds any effluent limitation in the permit (See G.15, "Upset").
- d. Any violation of a maximum daily or instantaneous maximum discharge limitation for any of the pollutants in Section S1.A of this permit.
- e. Any overflow prior to the treatment works, whether or not such overflow endangers health or the environment or exceeds any effluent limitation in the permit.

3. Report Within Five Days

The Permittee must also provide a written submission within five days of the time that the Permittee becomes aware of any event required to be reported under subparts 1 or 2, above. The written submission must contain:

- a. A description of the noncompliance and its cause.
- b. The period of noncompliance, including exact dates and times.

- c. The estimated time noncompliance is expected to continue if it has not been corrected.
- d. Steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.
- e. If the noncompliance involves an overflow prior to the treatment works, an estimate of the quantity (in gallons) of untreated overflow.

4. Waiver of Written Reports

Ecology may waive the written report required in subpart 3, above, on a case-by-case basis upon request if a timely oral report has been received.

5. All Other Permit Violation Reporting

The Permittee must report all permit violations, which do not require immediate or within 24 hours reporting, when it submits monitoring reports for S3.A ("Reporting"). The reports must contain the information listed in paragraph E.3, above. Compliance with these requirements does not relieve the Permittee from responsibility to maintain continuous compliance with the terms and conditions of this permit or the resulting liability for failure to comply.

6. Report Submittal

The Permittee must submit reports to the address listed in S3.

F. Other Reporting

The Permittee must report a spill of oil or hazardous materials in accordance with the requirements of RCW 90.56.280 and chapter 173-303-145. You can obtain further instructions at the following website:
<http://www.ecy.wa.gov/programs/spills/other/reportaspill.htm>.

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to Ecology, it must submit such facts or information promptly.

The Permittee must submit a new application or supplement at least 180 days prior to commencement of discharges, resulting from the activities listed below, which may result in permit violations. These activities include: any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility.

G. Maintaining a Copy of This Permit

The Permittee must keep a copy of this permit at the facility and make it available upon request to Ecology inspectors.

S4. FACILITY LOADING

A. Design Criteria

The flows or waste loads for the permitted facility must not exceed the following design criteria:

Wet season peak day flow:	150 MGD
Average flow for the maximum month:	60 MGD
BOD ₅ influent loading for maximum month:	127,000 lbs/day
TSS influent loading for maximum month:	114,000 lbs/day

B. Plans for Maintaining Adequate Capacity

When the actual flow or waste load reaches 85 percent of any one of the design criteria in S4.A for three consecutive months, or when the projected increases would reach design capacity within five years, whichever occurs first, the Permittee shall submit to Ecology, a plan and a schedule for continuing to maintain capacity at the facility sufficient to achieve the effluent limitations and other conditions of this permit. This plan shall address any of the following actions or any others necessary to meet this objective.

1. Analysis of the present design including the introduction of any process modifications that would establish the ability of the existing facility to achieve the effluent limits and other requirements of this permit at specific levels in excess of the existing design criteria specified in paragraph A above.
2. Reduction or elimination of excessive infiltration and inflow of uncontaminated ground and surface water into the sewer system.
3. Limitation on future sewer extensions or connections or additional waste loads.
4. Modification or expansion of facilities necessary to accommodate increased flow or waste load.
5. Reduction of industrial or commercial flows or waste loads to allow for increasing sanitary flow or waste load.

Engineering documents associated with the plan must meet the requirements of WAC 173-240-060, "Engineering Report," and be approved by Ecology prior to any construction. The plan shall specify any contracts, ordinances, methods for financing, or other arrangements necessary to achieve this objective.

C. Duty to Mitigate

The Permittee is required to take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit that has a reasonable likelihood of adversely affecting human health or the environment

D. Notification of New or Altered Sources

The Permittee shall submit written notice to Ecology whenever any new discharge or a substantial change in volume or character of an existing discharge into the Publicly Owned Treatment Works (POTW) is proposed which: (1) would interfere with the operation of, or exceed the design capacity of, any portion of the POTW; (2) is not part of an approved general sewer plan or approved plans and specifications; or (3) would be subject to pretreatment standards under 40 CFR Part 403 and Section 307(b) of the Clean Water Act. This notice shall include an evaluation of the POTW's ability to adequately transport and treat the added flow and/or waste load, the quality and volume of effluent to be discharged to the POTW, and the anticipated impact on the Permittee's effluent [40 CFR 122.42(b)].

E. Infiltration and Inflow Evaluation

1. The Permittee shall conduct an infiltration and inflow evaluation. Refer to the U.S. EPA publication, *I/I Analysis and Project Certification*, available as Publication No. 97-03 at: Publications Office, Department of Ecology, P.O. Box 47600, Olympia, Washington 98504-7600. Plant monitoring records may be used to assess measurable infiltration and inflow.
2. A report shall be prepared which summarizes any measurable infiltration and inflow. If infiltration and inflow have increased by more than 15 percent from that found in the first report based on equivalent rainfall, the report shall contain a plan and a schedule for: (1) locating the sources of infiltration and inflow; and (2) correcting the problem.
3. The report shall be submitted by **March 15, 2011**, and **annually** thereafter.

F. Wasteload Assessment

The Permittee shall conduct an annual assessment of their flow and waste load and submit a report to Ecology by **March 15, 2011**, and **annually** thereafter. The report shall contain the following: an indication of compliance or noncompliance with the permit effluent limitations; a comparison between the existing and design monthly average flow for the maximum month, peak flows, BOD and total suspended solids loadings; and (except for the first report) the percentage increase in these parameters since the last annual report. The report shall also state the present and design population or population equivalent, projected population growth rate, and the estimated date upon which the design capacity is projected to be reached, according to the most restrictive of the parameters above. The interval for review and reporting may be modified if Ecology determines that a different frequency is sufficient.

S5. OPERATION AND MAINTENANCE

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the

operation of back-up or auxiliary facilities or similar systems, which are installed by a Permittee only when the operation is necessary to achieve compliance with the conditions of this permit.

A. Certified Operator

An operator certified for at least a Class IV plant by the state of Washington shall be in responsible charge of the day-to-day operation of the wastewater treatment plant. An operator certified for at least a Class III plant shall be in charge during all regularly scheduled shifts.

B. O & M Program

The Permittee shall institute an adequate operation and maintenance program for their entire sewage system. Maintenance records shall be maintained on all major electrical and mechanical components of the treatment plant, as well as the sewage system and pumping stations. Such records shall clearly specify the frequency and type of maintenance recommended by the manufacturer and shall show the frequency and type of maintenance performed. These maintenance records shall be available for inspection at all times.

C. Short-term Reduction

If a Permittee contemplates a reduction in the level of treatment that would cause a violation of permit discharge limitations on a short-term basis for any reason, and such reduction cannot be avoided, the Permittee shall give written notification to Ecology, if possible, 30 days prior to such activities, detailing the reasons for, length of time of, and the potential effects of the reduced level of treatment. This notification does not relieve the Permittee of their obligations under this permit.

D. Electrical Power Failure

The Permittee is responsible for maintaining adequate safeguards to prevent the discharge of untreated wastes or wastes not treated in accordance with the requirements of this permit during electrical power failure at the treatment plant and/or sewage lift stations either by means of alternate power sources, standby generator, or retention of inadequately treated wastes. The Permittee shall maintain Reliability Class II (EPA 430-99-74-001) at the wastewater treatment plant, which requires primary sedimentation and disinfection.

E. Prevent Connection of Inflow

The Permittee shall strictly enforce their sewer ordinances and not allow the connection of inflow (roof drains, foundation drains, etc.) to the sanitary sewer system.

F. Bypass Procedures

Bypass, which is the intentional diversion of waste streams from any portion of a treatment facility, is prohibited, and Ecology may take enforcement action against a Permittee for bypass unless one of the following circumstances (1, 2, or 3) is applicable.

Note: Flow splitting and blending as allowed under this permit and described in Ecology approved Facility Plan is not considered a bypass under this section.

1. Bypass for essential maintenance without the potential to cause violation of permit limits or conditions.

Bypass is authorized if it is for essential maintenance and does not have the potential to cause violations of limitations or other conditions of this permit, or adversely impact public health as determined by Ecology prior to the bypass. The Permittee shall submit prior notice, if possible at least 10 days before the date of the bypass.

2. Bypass which is unavoidable, unanticipated and results in noncompliance of this permit.

This bypass is permitted only if:

- a. Bypass is unavoidable to prevent loss of life, personal injury, or severe property damage. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which would cause them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass.
- b. There are no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment downtime (but not if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance), or transport of untreated wastes to another treatment facility.
- c. Ecology is properly notified of the bypass as required in Condition S3.E of this permit.

3. Bypass which is anticipated and has the potential to result in noncompliance of this permit

The Permittee shall notify Ecology at least 30 days before the planned date of bypass. The notice shall contain: (1) a description of the bypass and its cause; (2) an analysis of all known alternatives which would eliminate, reduce, or mitigate the need for bypassing; (3) a cost-effectiveness analysis of alternatives including comparative resource damage assessment; (4) the minimum and maximum duration of bypass under each alternative; (5) a recommendation as to the preferred alternative for conducting the bypass; (6) the projected date of bypass initiation; (7) a statement of compliance with State Environmental Policy Act (SEPA); (8) a request for modification of water quality standards as provided for in WAC 173-201A-110, if an exceedance of any water quality standard is

anticipated; and (9) steps taken or planned to reduce, eliminate, and prevent reoccurrence of the bypass.

For probable construction bypasses, the need to bypass is to be identified as early in the planning process as possible. The analysis required above shall be considered during preparation of the engineering report or facilities plan and plans and specifications and shall be included to the extent practical. In cases where the probable need to bypass is determined early, continued analysis is necessary up to and including the construction period in an effort to minimize or eliminate the bypass.

Ecology will consider the following prior to issuing an administrative order for this type bypass:

- a. If the bypass is necessary to perform construction or maintenance-related activities essential to meet the requirements of this permit.
- b. If there are feasible alternatives to bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, stopping production, maintenance during normal periods of equipment down time, or transport of untreated wastes to another treatment facility.
- c. If the bypass is planned and scheduled to minimize adverse effects on the public and the environment.

After consideration of the above and the adverse effects of the proposed bypass and any other relevant factors, Ecology will approve or deny the request. The public shall be notified and given an opportunity to comment on bypass incidents of significant duration, to the extent feasible. Approval of a request to bypass will be by administrative order issued by Ecology under Revised Code of Washington (RCW) 90.48.120.

G. Operations and Maintenance Manual

The Permittee must:

1. Update the Operations and Maintenance (O&M) Manual in accordance with 173-240-080 WAC and submit it to Ecology by **July 30, 2012**.
2. Review the O&M Manual at least annually and confirm this review by letter to Ecology. The first letter is due **July 30, 2013**, and **annually** thereafter.
3. Submit to Ecology for review substantial changes or updates to the O&M Manual whenever it incorporates them into the manual.
4. Keep the approved O&M Manual at the permitted facility.
5. Follow the instructions and procedures of this manual.

In addition to the requirements of WAC 173-240-080 (1) through (5), the O&M Manual must include:

1. Emergency procedures for cleanup in the event of wastewater system upset or failure.
2. Wastewater system maintenance procedures that contribute to the generation of process wastewater.
3. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).
4. The treatment plant process control monitoring schedule.
5. Minimum staffing adequate to operate and maintain the treatment processes and carry out compliance monitoring required by the permit.

S6. PRETREATMENT

A. General Requirements

1. The Permittee shall implement the Wastewater Pretreatment Program in accordance with the legal authorities, policies, procedures, and financial provisions described in the Permittee's approved pretreatment program submittal entitled "Industrial Pretreatment Program" and dated October 7, 1994; as amended; and the General Pretreatment Regulations (40 CFR Part 403). At a minimum, the following pretreatment implementation activities shall be undertaken by the Permittee:
 - a. Enforce categorical pretreatment standards promulgated pursuant to Section 307(b) and (c) of the Federal Clean Water Act (hereinafter, the Act), prohibited discharge standards as set forth in 40 CFR 403.5, local limitations specified in Section 12.08.040 of Ordinance 27003, any approved revisions thereto, or state standards, which ever are most stringent or apply at the time of issuance or modification of a local industrial waste discharge permit. Locally derived limitations shall be defined as pretreatment standards under Section 307(d) of the Act and shall not be limited to categorical industrial facilities.
 - b. Issue wastewater discharge permits to all significant industrial users [SIUs, as defined in 40 CFR 403.3(t)(i)(ii)] contributing to the treatment system, including those from other jurisdictions. Industrial waste discharge permits shall contain as a minimum, all the requirements of 40 CFR 403.8 (f)(1)(iii).

- c. Maintain and update, as necessary, records identifying the nature, character, and volume of pollutants contributed by industrial users to the POTW. Records shall be maintained for at least a three-year period.
- d. Perform inspections, surveillance, and monitoring activities on industrial users to determine and/or confirm compliance with applicable pretreatment standards and requirements. A thorough inspection of SIUs shall be conducted annually. Frequency of regular local monitoring of SIU wastewaters shall normally be commensurate with the character and volume of the wastewater but shall not be less than once per year. Sample collection and analysis shall be performed in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v) and 40 CFR Part 136.
- e. Enforce and obtain remedies for noncompliance by any industrial users with applicable pretreatment standards and requirements. Once violations have been identified, the Permittee shall take timely and appropriate enforcement action to address the noncompliance. The Permittee's action shall follow its enforcement response procedures and any approved amendments, thereof.
- f. Publish, annually in the largest daily newspaper in the Permittee's service area, a list of all industrial users which, at any time in the previous 12 months, were in significant noncompliance as defined in 40 CFR 403.8(f)(2)(vii).
- g. If the Permittee elects to conduct sampling of a SIU's discharge in lieu of the user self-monitoring, it shall sample and analyze for all regulated pollutants in accordance with 40 CFR Part 403.12(b)(5)(ii)-(v), 40 CFR 403.12(g), and 40 CFR Part 136. The character and volume of the samples shall be representative of the discharge and shall provide adequate data to determine compliance, but in no case should sampling occur less than two times per year.
- h. Once per permit cycle (by December 15, 2014, if not on a rotating basis of 20 percent/year) confirm the proper categorization of each non-domestic source of pollutants following Ecology guidance "Conducting an Industrial User Survey." Also, develop and maintain a database which includes the categorization of each non-domestic discharger which is either an SIU or a minor industrial user [including all SIUs which have been downgraded in accordance with 403.3(t)(2)]. The database shall include a list of those industries for which a signed IU Survey form has been determined to be necessary in order to ensure that potential sources of pollution are aware of their requirements under the pretreatment program. The database shall include the information necessary to demonstrate compliance with each requirement of 403.8(f)(6) and 403.12(i)(1).
- i. Maintain adequate staff, funds, and equipment to implement its pretreatment program.

- j. Establish, where necessary, contracts or legally binding agreements with contributing jurisdictions to ensure compliance with applicable pretreatment requirements by commercial or industrial users within these jurisdictions. These contracts or agreements shall identify the agency responsible for the various implementation and enforcement activities to be performed in the contributing jurisdiction. In addition, the Permittee shall be required to develop a Memorandum of Understanding (or Interlocal Agreement) that outlines the specific roles, responsibilities, and pretreatment activities of each jurisdiction.
- 2. The Permittee shall implement the Accidental Spill Prevention Program described in the approved Industrial Pretreatment Program dated October 7, 1994.
 - 3. The Permittee shall periodically evaluate whether each Significant Industrial User needs a plan to control slug discharges. For purposes of this subsection, a slug discharge is any discharge of a non-routine, episodic nature not specifically authorized by the pretreatment permit, such as an accidental spill or unauthorized batch discharge. The results of such activities shall be available to Ecology upon request. If the Permittee decides that a slug control plan is needed, the plan shall contain, at a minimum, the following elements:
 - a. Description of discharge practices, including non-routine batch discharges.
 - b. Description of stored chemicals.
 - c. Procedures for immediately notifying the Permittee of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days.
 - d. If necessary, procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment necessary for emergency response.
 - 4. Whenever it has been determined, on the basis of information provided to or obtained by Ecology, that any waste source contributes pollutants to the Permittee's treatment works in violation of Subsection (b), (c), or (d) of Section 307 of the Act, and the Permittee has not taken adequate corrective action, Ecology shall notify the Permittee of this determination. Failure by the Permittee to commence an appropriate enforcement action within 30 days of this notification may result in appropriate enforcement action by Ecology against the source and/or the Permittee.
 - 5. Pretreatment Report

The Permittee shall provide to Ecology an annual report that briefly describes its program activities during the previous calendar year. This report shall be submitted no later than **March 15th**, of each year to: Washington Department of Ecology, Southwest Regional Office, P.O. Box 47775, Olympia, Washington 98504-7775.

The report shall include the following information:

- a. The updated industrial user inventory as described in section S6.A.1.h.
- b. Results of wastewater sampling at the treatment plant as specified in Section S2. The Permittee shall calculate removal rates for each pollutant and evaluate the adequacy of the existing local limitations in Section 12.08.040 of Ordinance 27003 in prevention of treatment plant interference, pass through of pollutants that could affect receiving water quality, and sludge contamination.
- c. Status of program implementation, including:
 - (1) Any substantial modifications to the pretreatment program as originally approved by Ecology, including staffing and funding levels.
 - (2) Any interference, upset, or permit violations experienced at the POTW that are directly attributable to wastes from industrial users.
 - (3) Listing of industrial users inspected and/or monitored, and a summary of the results.
 - (4) Listing of industrial users scheduled for inspection and/or monitoring for the next year, and expected frequencies.
 - (5) Listing of industrial users notified of promulgated pretreatment standards and/or local standards as required in 40 CFR 403.8(f)(2)(iii). Indicate which industrial users are on compliance schedules and the final date of compliance for each.
 - (6) Listing of industrial users issued industrial wastewater discharge permits.
 - (7) Planned changes in the pretreatment program implementation plan. (See subsection A.6. below.)
- d. Status of compliance activities, including:
 - (1) Listing of industrial users that failed to submit baseline monitoring reports or any other reports required under 40 CFR 403.12 and Chapter 12.08 of the Permittee's industrial wastewater pretreatment program, dated October 7, 1994.

- (2) Listing of industrial users that were at any time during the reporting period not complying with federal, state, or local pretreatment standards or with applicable compliance schedules for achieving those standards, and the duration of such noncompliance.
 - (3) Summary of enforcement activities and other corrective actions taken or planned against non-complying industrial users. The Permittee shall supply to Ecology a copy of the public notice of facilities that were in significant noncompliance.
6. The Permittee shall request and obtain approval from Ecology prior to implementing any significant changes to the local pretreatment program as approved. The procedure of 40 CFR 403.18 (b) & (c) shall be followed.

B. Monitoring Requirements

The Permittee shall monitor its influent, effluent, and biosolids for the priority pollutants identified in Tables II and III of Appendix D of 40 CFR Part 122 as amended and any other pollutants expected from non-domestic sources using U.S. EPA-approved procedures for collection, preservation, storage, and analysis. Influent, effluent, and sludge samples shall be tested for the priority pollutant metals (Table III, 40 CFR 122, Appendix D) on a quarterly basis throughout the term of this permit. Influent, effluent, and sludge samples shall be tested for the organic priority pollutants (Table II, 40 CFR 122, Appendix D) on an annual basis.

1. The POTW influent and effluent shall be sampled on a day when industrial discharges are occurring at normal to maximum levels. Samples for the analysis of acid and base/neutral extractable compounds and metals shall be 24-hour composites. Samples for the analysis of volatile organic compounds shall be collected using grab sampling techniques at equal intervals for the total of four grab samples per day.

A single analysis for volatile pollutants (Method 624) may be run for each monitoring day by compositing equal volumes of each grab sample directly in the GC purge and trap apparatus in the laboratory, with no less than 1 ml of each grab included in the composite.

Unless otherwise indicated, all reported test data for metals shall represent the total amount of the constituent present in all phases, whether solid, suspended, or dissolved, elemental or combined including all oxidation states.

Wastewater samples must be handled, prepared, and analyzed by GC/MS in accordance with the latest revision of the U.S. EPA Methods 624 and 625.

2. A sludge sample shall be collected concurrent with a wastewater sample and may be taken as a single grab of residual sludge. Sampling and analysis shall conform to U.S. EPA Methods 624 and 625 unless the Permittee requests an alternate method and it has been approved by Ecology.

3. Cyanide, phenols, and oils shall be taken as grab samples. Oils shall be hexane soluble or equivalent, and should be measured in the influent and effluent only.

C. Reporting of Monitoring Results

The Permittee shall include a summary of monitoring results in the Annual Pretreatment Report.

D. Local Limit Development

As sufficient data becomes available, the Permittee shall, in consultation with Ecology, reevaluate their local limits in order to prevent pass through or interference. Upon determination by Ecology that any pollutant present causes pass through or interference, or exceeds established biosolids standards, the Permittee shall establish new local limits or revise existing local limits as required by 40 CFR 403.5. In addition, Ecology may require revision or establishment of local limits for any pollutant discharged from the POTW that has a reasonable potential to exceed the Water Quality Standards, Sediment Standards, or established effluent limits, or causes whole effluent toxicity. The determination by Ecology shall be in the form of an Administrative Order.

Ecology may modify this permit to incorporate additional requirements relating to the establishment and enforcement of local limits for pollutants of concern. Any permit modification is subject to formal due process procedures pursuant to state and federal law and regulation.

S7. RESIDUAL SOLIDS

Residual solids include screenings, grit, scum, primary sludge, waste activated sludge, and other solid waste. The Permittee shall store and handle all residual solids in such a manner so as to prevent their entry into state ground or surface waters. The Permittee shall not discharge leachate from residual solids to state surface or ground waters.

S8. ACUTE TOXICITY

A. Effluent Limit for Acute Toxicity

The effluent limit for acute toxicity is no acute toxicity detected in a test concentration representing the acute critical effluent concentration (ACEC).

The ACEC means the maximum concentration of effluent during critical conditions at the boundary of the zone of acute criteria exceedance assigned pursuant to WAC 173-201A-400. The zone of acute criteria exceedance is authorized in Section S1.C of this permit. **The ACEC equals 4.5 percent effluent.**

In the event of failure to pass the test described in subsection B. of this section for compliance with the effluent limit for acute toxicity, the Permittee is considered to be in compliance with all permit requirements for acute whole effluent toxicity as long as the requirements in subsection C. are being met to the satisfaction of Ecology.

B. Monitoring for Compliance With an Effluent Limit for Acute Toxicity

The Permittee shall conduct monitoring to determine compliance with the effluent limit for acute toxicity. The acute toxicity tests shall be performed using at a minimum 100% effluent, the ACEC, and a control. Acute toxicity testing shall follow protocols, monitoring requirements, and quality assurance/quality control procedures specified in this Section. Testing shall begin within 60 days of the permit effective date. A written report shall be submitted to Ecology within 60 days after the sample date. The percent survival in 100 percent effluent shall be reported along with all compliance monitoring results.

Compliance monitoring shall be conducted once every year while flow blending is occurring and shall also be conducted quarterly with the first report due by **December 15, 2010**, at times when flow blending is not occurring using the species and protocols listed below:

1. Daphnid, *Ceriodaphnia dubia*, *Daphnia pulex*, or *Daphnia magna* (48 hour static test, method: EPA/600/4-90/027F).

In the event the permit is extended after the five year permit term and no acute test has shown less than 65 percent survival in 100 percent effluent during the permit term, the Permittee may petition Ecology to reduce the monitoring frequency to once per year.

The Permittee is in violation of the effluent limit for acute toxicity in subsection A. and shall immediately implement subsection C. if any acute toxicity test conducted for compliance monitoring determines a statistically significant difference in survival between the control and the ACEC using hypothesis testing at the 0.05 level of significance (Appendix H, EPA/600/4-89/001). If the difference in survival between the control and the ACEC is less than 10 percent, the hypothesis test shall be conducted at the 0.01 level of significance.

C. Response to Noncompliance With an Effluent Limit for Acute Toxicity

If a toxicity test conducted for compliance monitoring under subsection B. determines a statistically significant difference in response between the ACEC and the control, the Permittee shall begin additional compliance monitoring within one week from the time of receiving the test results. This additional monitoring shall be conducted weekly for four consecutive weeks using the same test and species as the failed compliance test. Testing shall be conducted using a series of at least five effluent concentrations and a control in order to be able to determine appropriate point estimates. One of these effluent concentrations shall equal the ACEC and be compared statistically to the nontoxic control in order to determine compliance with the effluent limit for acute toxicity as described in subsection B. The discharger shall return to the original monitoring frequency in subsection B. after completion of the additional compliance monitoring.

If the Permittee believes that a test indicating noncompliance will be identified by Ecology as an anomalous test result, the Permittee may notify Ecology that the compliance test result might be anomalous and that the Permittee intends to take only one additional sample for toxicity testing and wait for notification from Ecology before

completing the additional monitoring required in this subsection. The notification to Ecology shall accompany the report of the compliance test result and identify the reason for considering the compliance test result to be anomalous. The Permittee shall complete all of the additional monitoring required in this subsection as soon as possible after notification by Ecology that the compliance test result was not anomalous. If the one additional sample fails to comply with the effluent limit for acute toxicity, then the Permittee shall proceed without delay to complete all of the additional monitoring required in this subsection. The one additional test result shall replace the compliance test result upon determination by Ecology that the compliance test result was anomalous.

If all of the additional compliance monitoring conducted in accordance with this subsection complies with the permit limit, the Permittee shall search all pertinent and recent facility records (operating records, monitoring results, inspection records, spill reports, weather records, production records, raw material purchases, pretreatment records, etc.) and submit a report to Ecology on possible causes and preventive measures for the transient toxicity event which triggered the additional compliance monitoring.

If toxicity occurs in violation of the acute toxicity limit during the additional compliance monitoring, the Permittee shall submit a Toxicity Identification/Reduction Evaluation (TI/RE) plan to Ecology within 60 days after the sample date. The TI/RE plan shall be based on WAC 173-205-100(2) and shall be implemented in accordance with WAC 173-205-100(3).

D. Sampling and Reporting Requirements

1. All reports for effluent characterization or compliance monitoring shall be submitted in accordance with the most recent version of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* in regards to format and content. Reports shall contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data on floppy disk for electronic entry into Ecology's database, then the Permittee shall send the disk to Ecology along with the test report, bench sheets, and reference toxicant results.
2. Testing shall be conducted on 24-hour composite effluent samples. Samples taken for toxicity testing shall be cooled to 4 degrees Celsius while being collected and shall be sent to the lab immediately upon completion. The lab shall begin the toxicity testing as soon as possible but no later than 36 hours after sampling was ended.
3. All samples and test solutions for toxicity testing shall have water quality measurements as specified in Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria* or most recent version thereof.
4. All toxicity tests shall meet quality assurance criteria and test conditions in the most recent versions of the EPA manual listed in subsection A. and Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If test results are determined to be invalid or anomalous by Ecology, testing shall be repeated with freshly collected effluent.

5. Control water and dilution water shall be laboratory water meeting the requirements of the EPA manual listed in subsection A or pristine natural water of sufficient quality for good control performance.
6. The whole effluent toxicity tests shall be run on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance monitoring in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the ACEC.
8. All whole effluent toxicity tests, effluent screening tests, and rapid screening tests that involve hypothesis testing and do not comply with the acute statistical power standard of 29 percent as defined in WAC 173-205-020 must be repeated on a fresh sample with an increased number of replicates to increase the power.

S9. CHRONIC TOXICITY

A. Testing When There Is No Permit Limit for Chronic Toxicity

The Permittee must:

1. Continue chronic toxicity testing once every year while flow blending is occurring in accordance with the procedures and protocols outlined in subsections A and B of this section. Submit the results to Ecology per section S3.A of this permit.
2. Conduct chronic toxicity testing on final effluent during **July 2014** and **January 2015** (once in the last summer and once in the last winter prior to submission of the application for permit renewal). Submit the results to Ecology with the permit renewal application by **May 1, 2015**.
3. Conduct chronic toxicity testing on a series of at least five concentrations of effluent and a control. This series of dilutions must include the acute critical effluent concentration (ACEC). **The ACEC equals 4.5 percent effluent.**
4. Compare the ACEC to the control using hypothesis testing at the 0.05 level of significance as described in Appendix H, EPA/600/4-89/001.
5. Perform chronic toxicity tests with all of the following species and the most recent version of the following protocols:

Saltwater Chronic Test	Species	Method
Topsmelt survival and growth	<i>Atherinops affinis</i>	EPA/600/R-95/136
Mysid shrimp survival and growth	<i>Mysidopsis bahia</i> / <i>Americamysis bahia</i>	EPA-821-R-02-014

B. Sampling and Reporting Requirements

1. The Permittee must submit all reports for toxicity testing in accordance with the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. Reports must contain bench sheets and reference toxicant results for test methods. If the lab provides the toxicity test data in electronic format for entry into Ecology's database, then the Permittee must send the data to Ecology along with the test report, bench sheets, and reference toxicant results.
2. The Permittee must collect 24-hour composite effluent samples for toxicity testing. The Permittee must cool the samples to 0 - 6 degrees Celsius during collection and send them to the lab immediately upon completion. The lab must begin the toxicity testing as soon as possible but no later than 36 hours after sampling was completed.
3. The laboratory must conduct water quality measurements on all samples and test solutions for toxicity testing, as specified in the most recent version of Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*.
4. All toxicity tests must meet quality assurance criteria and test conditions specified in the most recent versions of the EPA methods listed in subsection A. and the Department of Ecology Publication # WQ-R-95-80, *Laboratory Guidance and Whole Effluent Toxicity Test Review Criteria*. If Ecology determines any test results to be invalid or anomalous, the Permittee must repeat the testing with freshly collected effluent.
5. The laboratory must use control water and dilution water meeting the requirements of the EPA methods listed in subsection A. or pristine natural water of sufficient quality for good control performance.
6. The Permittee must conduct whole effluent toxicity tests on an unmodified sample of final effluent.
7. The Permittee may choose to conduct a full dilution series test during compliance testing in order to determine dose response. In this case, the series must have a minimum of five effluent concentrations and a control. The series of concentrations must include the CCEC and the ACEC. The CCEC and the ACEC may either substitute for the effluent concentrations that are closest to them in the dilution series or be extra effluent concentrations. **The CCEC equals 0.7 percent effluent. The ACEC equals 4.5 percent effluent.**
8. All whole effluent toxicity tests that involve hypothesis testing must comply with the chronic statistical power standard of 39 percent as defined in WAC 173-205-020. If the test does not meet the power standard, the Permittee must repeat the test on a fresh sample with an increased number of replicates to increase the power.

9. Reports of individual characterization or compliance test results must be submitted to Ecology within 60 days after each sample date.

S10. SANITARY SEWER OVERFLOW ELIMINATION PROGRAM

Discharges from the Tacoma Central Wastewater Treatment Plant sanitary sewer collection system are not permitted and must be reported as noncompliance in accordance with Special Condition S3.E of this permit. The Permittee shall continue its sanitary sewer overflow (SSO) elimination program to attain compliance with this NPDES Permit, the federal Clean Water Act, 90.48 RCW and 90.52 RCW, and Chapter 173-221 WAC. The program involves the replacement and rehabilitation of the City's wastewater collection system.

A. Sanitary Sewer Collection System Rehabilitation and Replacement Program

The Permittee shall continue the collection system replacement and rehabilitation program to eliminate excessive infiltration and inflow. This rehabilitation program shall be based upon achieving the following goals:

1. No raw sewage overflows or bypasses.
2. Removal of all excessive infiltration and inflow (I/I).
3. Eliminating bottlenecks in the collection system that are preventing the conveyance of flow to the treatment plant during high flow events.
4. The wastewater treatment plant routinely and consistently meets the effluent concentration limits contained in Condition S1 of this permit.
5. All water collected in the collection system must be conveyed to the treatment plant and receive secondary treatment in order to meet the effluent standards in Section S1 prior to discharge through the permitted discharge point.

B. Progress Reports

The Permittee shall provide Ecology an **annual** progress report by **March 15th**, of each year, with the first report due by **March 15, 2011**, that briefly describes its SSO elimination program activities during the previous calendar year. Each progress report shall include a description of the activities conducted during the previous year that work toward achieving the goals stated above and problems anticipated or encountered which might place the Permittee out of compliance with the terms of this permit.

The progress report shall provide the location and volume of each sanitary sewer overflow and the corresponding precipitation amount (inches prior to the overflow), and the total number and volume of sanitary sewer overflows (and corresponding precipitation amounts, both those amounts causing overflows, and seasonal totals) in the previous calendar years. The City may include additional data and information as it deems appropriate.

The City may submit a single report for the city-wide collection system, and the report will satisfy both this permit's submittal requirement, and a similar submittal requirement in the North End Treatment plant discharge permit.

S11. OUTFALL EVALUATION

The Permittee shall inspect, once per permit, the submerged portion of the outfall line and diffuser to document its integrity and continued function. If conditions allow for a photographic verification, it shall be included in the report. The inspection shall be conducted and the inspection report submitted to Ecology by **December 15, 2014**.

GENERAL CONDITIONS

G1. SIGNATORY REQUIREMENTS

All applications, reports, or information submitted to Ecology shall be signed and certified.

- A. All permit applications shall be signed by either a principal executive officer or a ranking elected official.
- B. All reports required by this permit and other information requested by Ecology shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 1. The authorization is made in writing by a person described above and submitted to Ecology.
 - 2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
- C. Changes to authorization. If an authorization under paragraph B.2 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph B.2 above must be submitted to Ecology prior to or together with any reports, information, or applications to be signed by an authorized representative.
- D. Certification. Any person signing a document under this section shall make the following certification:

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

G2. RIGHT OF INSPECTION AND ENTRY

The Permittee shall allow an authorized representative of Ecology, upon the presentation of credentials and such other documents as may be required by law:

- A. To enter upon the premises where a discharge is located or where any records must be kept under the terms and conditions of this permit.

- B. To have access to and copy - at reasonable times and at reasonable cost - any records required to be kept under the terms and conditions of this permit.
- C. To inspect - at reasonable times - any facilities, equipment (including monitoring and control equipment), practices, methods, or operations regulated or required under this permit.
- D. To sample or monitor - at reasonable times - any substances or parameters at any location for purposes of assuring permit compliance or as otherwise authorized by the Clean Water Act.

G3. PERMIT ACTIONS

This permit may be modified, revoked and reissued, or terminated either at the request of any interested person (including the Permittee) or upon Ecology's initiative. However, the permit may only be modified, revoked and reissued, or terminated for the reasons specified in 40 CFR 122.62, 122.64 or WAC 173-220-150 according to the procedures of 40 CFR 124.5.

- A. The following are causes for terminating this permit during its term, or for denying a permit renewal application:
 - 1. Violation of any permit term or condition.
 - 2. Obtaining a permit by misrepresentation or failure to disclose all relevant facts.
 - 3. A material change in quantity or type of waste disposal.
 - 4. A determination that the permitted activity endangers human health or the environment, or contributes to water quality standards violations and can only be regulated to acceptable levels by permit modification or termination [40 CFR Part 122.64(3)].
 - 5. A change in any condition that requires either a temporary or permanent reduction, or elimination of any discharge or sludge use or disposal practice controlled by the permit [40 CFR Part 122.64(4)].
 - 6. Nonpayment of fees assessed pursuant to RCW 90.48.465.
 - 7. Failure or refusal of the Permittee to allow entry as required in RCW 90.48.090.
- B. The following are causes for modification but not revocation and reissuance except when the Permittee requests or agrees:
 - 1. A material change in the condition of the waters of the state.
 - 2. New information not available at the time of permit issuance that would have justified the application of different permit conditions.
 - 3. Material and substantial alterations or additions to the permitted facility or activities which occurred after this permit issuance.

4. Promulgation of new or amended standards or regulations having a direct bearing upon permit conditions, or requiring permit revision.
5. The Permittee has requested a modification based on other rationale meeting the criteria of 40 CFR Part 122.62.
6. Ecology has determined that good cause exists for modification of a compliance schedule, and the modification will not violate statutory deadlines.
7. Incorporation of an approved local pretreatment program into a municipality's permit.

C. The following are causes for modification or alternatively revocation and reissuance:

1. Cause exists for termination for reasons listed in A1 through A7 of this section, and Ecology determines that modification or revocation and reissuance is appropriate.
2. Ecology has received notification of a proposed transfer of the permit. A permit may also be modified to reflect a transfer after the effective date of an automatic transfer (General Condition G8) but will not be revoked and reissued after the effective date of the transfer except upon the request of the new Permittee.

G4. REPORTING A CAUSE FOR MODIFICATION

The Permittee shall submit a new application, or a supplement to the previous application, along with required engineering plans and reports whenever a material change to the facility or in the quantity or type of discharge is anticipated which is not specifically authorized by this permit. This application shall be submitted at least 60 days prior to any proposed changes. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not relieve the Permittee of the duty to comply with the existing permit until it is modified or reissued.

G5. PLAN REVIEW REQUIRED

Prior to constructing or modifying any wastewater control facilities, an engineering report and detailed plans and specifications shall be submitted to Ecology for approval in accordance with Chapter 173-240 WAC. Engineering reports, plans, and specifications shall be submitted at least 180 days prior to the planned start of construction unless a shorter time is approved by Ecology. Facilities shall be constructed and operated in accordance with the approved plans.

G6. COMPLIANCE WITH OTHER LAWS AND STATUTES

Nothing in this permit shall be construed as excusing the Permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G7. DUTY TO REAPPLY

The Permittee shall apply for permit renewal by **May 1, 2015**.

G8. TRANSFER OF THIS PERMIT

In the event of any change in control or ownership of facilities from which the authorized discharge emanate, the Permittee shall notify the succeeding owner or controller of the existence of this permit by letter, a copy of which shall be forwarded to Ecology.

A. Transfers by Modification

Except as provided in paragraph (B) below, this permit may be transferred by the Permittee to a new owner or operator only if this permit has been modified or revoked and reissued under 40 CFR 122.62(b)(2), or a minor modification made under 40 CFR 122.63(d), to identify the new Permittee and incorporate such other requirements as may be necessary under the Clean Water Act.

B. Automatic Transfers

This permit may be automatically transferred to a new Permittee if:

1. The Permittee notifies Ecology at least 30 days in advance of the proposed transfer date.
2. The notice includes a written agreement between the existing and new Permittees containing a specific date transfer of permit responsibility, coverage, and liability between them.
3. Ecology does not notify the existing Permittee and the proposed new Permittee of its intent to modify or revoke and reissue this permit. A modification under this subparagraph may also be minor modification under 40 CFR 122.63. If this notice is not received, the transfer is effective on the date specified in the written agreement.

G9. REDUCED PRODUCTION FOR COMPLIANCE

The Permittee, in order to maintain compliance with its permit, shall control production and/or all discharges upon reduction, loss, failure, or bypass of the treatment facility until the facility is restored or an alternative method of treatment is provided. This requirement applies in the situation where, among other things, the primary source of power of the treatment facility is reduced, lost, or fails.

G10. REMOVED SUBSTANCES

Collected screenings, grit, solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall not be resuspended or reintroduced to the final effluent stream for discharge to state waters.

G11. DUTY TO PROVIDE INFORMATION

The Permittee shall submit to Ecology, within a reasonable time, all information which Ecology may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The Permittee shall also

submit to Ecology upon request, copies of records required to be kept by this permit [40 CFR 122.41(h)].

G12. OTHER REQUIREMENTS OF 40 CFR

All other requirements of 40 CFR 122.41 and 122.42 are incorporated in this permit by reference.

G13. ADDITIONAL MONITORING

Ecology may establish specific monitoring requirements in addition to those contained in this permit by administrative order or permit modification.

G14. PAYMENT OF FEES

The Permittee shall submit payment of fees associated with this permit as assessed by Ecology.

G15. PENALTIES FOR VIOLATING PERMIT CONDITIONS

Any person who is found guilty of willfully violating the terms and conditions of this permit shall be deemed guilty of a crime, and upon conviction thereof shall be punished by a fine of up to \$10,000 and costs of prosecution, or by imprisonment in the discretion of the court. Each day upon which a willful violation occurs may be deemed a separate and additional violation.

Any person who violates the terms and conditions of a waste discharge permit shall incur, in addition to any other penalty as provided by law, a civil penalty in the amount of up to \$10,000 for every such violation. Each and every such violation shall be a separate and distinct offense, and in case of a continuing violation, every day's continuance shall be deemed to be a separate and distinct violation.

G16. UPSET

Definition – “Upset” means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of the following paragraph are met.

A Permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that: 1) an upset occurred and that the Permittee can identify the cause(s) of the upset; 2) the permitted facility was being properly operated at the time of the upset; 3) the Permittee submitted notice of the upset as required in Condition S3.E; and 4) the Permittee complied with any remedial measures required under S5 of this permit.

In any enforcement proceeding the Permittee seeking to establish the occurrence of an upset has the burden of proof.

G17. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

G18. DUTY TO COMPLY

The Permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.

G19. TOXIC POLLUTANTS

The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if this permit has not yet been modified to incorporate the requirement.

G20. PENALTIES FOR TAMPERING

The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than two years per violation, or by both. If a conviction of a person is for a violation committed after a first conviction of such person under this Condition, punishment shall be a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or by both.

G21. REPORTING PLANNED CHANGES

The Permittee shall, as soon as possible, give notice to Ecology of planned physical alterations or additions to the permitted facility, production increases, or process modification which will result in: 1) the permitted facility being determined to be a new source pursuant to 40 CFR 122.29(b); 2) a significant change in the nature or an increase in quantity of pollutants discharged; or 3) a significant change in the Permittee's sludge use or disposal practices. Following such notice, this permit may be modified, or revoked and reissued pursuant to 40 CFR 122.62(a) to specify and limit any pollutants not previously limited. Until such modification is effective, any new or increased discharge in excess of permit limits or not specifically authorized by this permit constitutes a violation of the terms and conditions of this permit.

G22. REPORTING ANTICIPATED NON-COMPLIANCE

The Permittee shall give advance notice to Ecology by submission of a new application or supplement thereto at least 180 days prior to commencement of such discharges, of any facility expansions, production increases, or other planned changes, such as process modifications, in the permitted facility or activity which may result in noncompliance with permit limits or conditions. Any maintenance of facilities, which might necessitate unavoidable interruption of operation and degradation of effluent quality, shall be scheduled during noncritical water quality periods and carried out in a manner approved by Ecology.

G23. REPORTING OTHER INFORMATION

Where the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application, or in any report to Ecology, it shall promptly submit such facts or information.

G24. COMPLIANCE SCHEDULES

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this permit shall be submitted no later than 14 days following each schedule date.

APPENDIX A

EFFLUENT CHARACTERIZATION FOR POLLUTANTS THIS LIST INCLUDES EPA REQUIRED POLLUTANTS (PRIORITY POLLUTANTS) AND SOME ECOLOGY PRIORITY TOXIC CHEMICALS (PBTs)

The following table specifies analytical methods and levels to be used for effluent characterization in NPDES and State waste discharge permits. This appendix specifies effluent characterization requirements of the Department of Ecology unless other methods are specified in the body of this permit.

This permit specifies the compounds and groups of compounds to be analyzed. Ecology may require additional pollutants to be analyzed within a group. The objective of this appendix is to reduce the number of analytical “non-detects” in permit-required monitoring and to measure effluent concentrations near or below criteria values where possible at a reasonable cost. If a Permittee knows that an alternate, less sensitive method (higher DL and QL) from 40 CFR Part 136 is sufficient to produce measurable results in their effluent, that method may be used for analysis.

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL) ¹ μg/L unless specified	Quantitation Level (QL) ² μg/L unless specified
CONVENTIONALS			
Biochemical Oxygen Demand	SM5210-B		2 mg/L
Chemical Oxygen Demand	SM5220-D		10 mg/L
Total Organic Carbon	SM5310-B/C/D		1 mg/L
Total Suspended Solids	SM2540-D		5 mg/L
Total Ammonia (as N)	SM4500-NH ₃ -GH		0.3 mg/L
Flow	Calibrated device		
Dissolved oxygen	4500-OC/OG		0.2 mg/L
Temperature (max. 7-day avg.)	Analog recorder or Use micro-recording devices known as thermistors		0.2° C
pH	SM4500-H ⁺ B	N/A	N/A
NONCONVENTIONALS			
Total Alkalinity	SM2320-B		5 mg/L as CaCO ₃
Chlorine, Total Residual	4500 Cl G		50.0
Color	SM2120 B/C/E		10 color unit
Fecal Coliform	SM 9221D/E, 9222	N/A	N/A
Fluoride (16984-48-8)	SM4500-F E	25	100
Nitrate-Nitrite (as N)	4500-NO ₃ -E/F/H		100
Nitrogen, Total Kjeldahl (as N)	4500-NH ₃ -		300

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
	C/E/FG		
Ortho-Phosphate (PO ₄ as P)	4500- PE/PF	3	10
Phosphorus, Total (as P)	4500-PE/PF	3	10
Oil and Grease (HEM)	1664A	1,400	5,000
Salinity	SM2520-B		3 PSS
Settleable Solids	SM2540 -F		100
Sulfate (as mg/L SO ₄)	SM4110-B		200
Sulfide (as mg/L S)	4500-S ² F/D/E/G		200
Sulfite (as mg/L SO ₃)	SM4500-SO3B		2000
Total dissolved solids	SM2540 C		20 mg/L
Total Hardness	2340B		200 as CaCO ₃
Aluminum, Total (7429-90-5)	200.8	2.0	10
Barium Total (7440-39-3)	200.8	0.5	2.0
Boron Total (7440-42-8)	200.8	2.0	10.0
Cobalt, Total (7440-48-4)	200.8	0.05	0.25
Iron, Total (7439-89-6)	200.7	12.5	50
Magnesium, Total (7439-95-4)	200.7	10	50
Molybdenum, Total (7439-98-7)	200.8	0.1	0.5
Manganese, Total (7439-96-5)	200.8	0.1	0.5
Tin, Total (7440-31-5)	200.8	0.3	1.5
METALS, CYANIDE & TOTAL PHENOLS			
Antimony, Total (7440-36-0)	200.8	0.3	1.0
Arsenic, Total (7440-38-2)	200.8	0.1	0.5
Beryllium, Total (7440-41-7)	200.8	0.1	0.5
Cadmium, Total (7440-43-9)	200.8	0.05	0.25
Chromium (hex) dissolved (18540-29-9)	SM3500-Cr EC	0.3	1.2
Chromium, Total (7440-47-3)	200.8	0.2	1.0
Copper, Total (7440-50-8)	200.8	0.4	2.0
Lead, Total (7439-92-1)	200.8	0.1	0.5
Mercury, Total (7439-97-6)	1631E	0.0002	0.0005
Nickel, Total (7440-02-0)	200.8	0.1	0.5
Selenium, Total (7782-49-2)	200.8	1.0	1.0
Silver, Total (7440-22-4)	200.8	0.04	0.2
Thallium, Total (7440-28-0)	200.8	0.09	0.36
Zinc, Total (7440-66-6)	200.8	0.5	2.5
Cyanide, Total (57-12-5)	335.4	2	10
Cyanide, Weak Acid Dissociable	SM4500-CN I	2	10
Phenols, Total	EPA 420.1		50
DIOXIN			
2,3,7,8-Tetra-Chlorodibenzo-P-	1613B	1.3 pg/L	5 pg/L

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Dioxin (176-40-16)			
VOLATILE COMPOUNDS			
Acrolein (107-02-8)	624	5	10
Acrylonitrile (107-13-1)	624	1.0	2.0
Benzene (71-43-2)	624	1.0	2.0
Bromoform (75-25-2)	624	1.0	2.0
Carbon tetrachloride (56-23-5)	624/601 or SM6230B	1.0	2.0
Chlorobenzene (108-90-7)	624	1.0	2.0
Chloroethane (75-00-3)	624/601	1.0	2.0
2-Chloroethylvinyl Ether (110-75-8)	624	1.0	2.0
Chloroform (67-66-3)	624 or SM6210B	1.0	2.0
Dibromochloromethane (124-48-1)	624	1.0	2.0
1,2-Dichlorobenzene (95-50-1)	624	1.9	7.6
1,3-Dichlorobenzene (541-73-1)	624	1.9	7.6
1,4-Dichlorobenzene (106-46-7)	624	4.4	17.6
Dichlorobromomethane (75-27-4)	624	1.0	2.0
1,1-Dichloroethane (75-34-3)	624	1.0	2.0
1,2-Dichloroethane (107-06-2)	624	1.0	2.0
1,1-Dichloroethylene (75-35-4)	624	1.0	2.0
1,2-Dichloropropane (78-87-5)	624	1.0	2.0
1,3-dichloropropylene (mixed isomers) (542-75-6)	624	1.0	2.0
Ethylbenzene (100-41-4)	624	1.0	2.0
Methyl bromide (74-83-9) (Bromomethane)	624/601	5.0	10.0
Methyl chloride (74-87-3) (Chloromethane)	624	1.0	2.0
Methylene chloride (75-09-2)	624	5.0	10.0
1,1,2,2-Tetrachloroethane (79-34-5)	624	1.9	2.0
Tetrachloroethylene (127-18-4)	624	1.0	2.0
Toulene (108-88-3)	624	1.0	2.0
1,2-Trans-Dichloroethylene (156-60-5) (Ethylene dichloride)	624	1.0	2.0
1,1,1-Trichloroethane (71-55-6)	624	1.0	2.0
1,1,2-Trichloroethane (79-00-5)	624	1.0	2.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Trichloroethylene (79-01-6)	624	1.0	2.0
Vinyl chloride (75-01-4)	624/SM6200B	1.0	2.0
ACID COMPOUNDS			
2-Chlorophenol (95-57-8)	625	1.0	2.0
2,4-Dichlorophenol (120-83-2)	625	0.5	1.0
2,4-Dimethylphenol (105-67-9)	625	0.5	1.0
4,6-dinitro-o-cresol (534-52-1) (2-methyl-4,6,-dinitrophenol)	625/1625B	1.0	2.0
2,4 dinitrophenol (51-28-5)	625	1.0	2.0
2-Nitrophenol (88-75-5)	625	0.5	1.0
4-nitrophenol (100-02-7)	625	0.5	1.0
Parachlorometa cresol (59-50-7) (4-chloro-3-methylphenol)	625	1.0	2.0
Pentachlorophenol (87-86-5)	625	0.5	1.0
Phenol (108-95-2)	625	2.0	4.0
2,4,6-Trichlorophenol (88-06-2)	625	2.0	4.0
BASE/NEUTRAL COMPOUNDS (compounds in bold are Ecology PBTs)			
Acenaphthene (83-32-9)	625	0.2	0.4
Acenaphthylene (208-96-8)	625	0.3	0.6
Anthracene (120-12-7)	625	0.3	0.6
Benzidine (92-87-5)	625	12	24
Benzyl butyl phthalate (85-68-7)	625	0.3	0.6
Benzo(a)anthracene (56-55-3)	625	0.3	0.6
Benzo(j)fluoranthene (205-82-3)	625	0.5	1.0
Benzo(r,s,t)pentaphene (189-55-9)	625	0.5	1.0
Benzo(a)pyrene (50-32-8)	610/625	0.5	1.0
3,4-benzofluoranthene (Benzo(b)fluoranthene) (205-99-2)	610/625	0.8	1.6
11,12-benzofluoranthene (Benzo(k)fluoranthene) (207-08-9)	610/625	0.8	1.6
Benzo(ghi)Perylene (191-24-2)	610/625	0.5	1.0
Bis(2-chloroethoxy)methane (111-91-1)	625	5.3	21.2
Bis(2-chloroethyl)ether (111-44-4)	611/625	0.3	1.0
Bis(2-chloroisopropyl)ether (39638-32-9)	625	0.3	0.6

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
Bis(2-ethylhexyl)phthalate (117-81-7)	625	0.1	0.5
4-Bromophenyl phenyl ether (101-55-3)	625	0.2	0.4
2-Chloronaphthalene (91-58-7)	625	0.3	0.6
4-Chlorophenyl phenyl ether (7005-72-3)	625	0.3	0.5
Chrysene (218-01-9)	610/625	0.3	0.6
Dibenzo (a,j)acridine (224-42-0)	610M/625M	2.5	10.0
Dibenzo (a,h)acridine (226-36-8)	610M/625M	2.5	10.0
Dibenzo(a-h)anthracene (53-70-3)(1,2,5,6-dibenzanthracene)	625	0.8	1.6
Dibenzo(a,e)pyrene (192-65-4)	610M/625M	2.5	10.0
Dibenzo(a,h)pyrene (189-64-0)	625M	2.5	10.0
3,3-Dichlorobenzidine (91-94-1)	605/625	0.5	1.0
Diethyl phthalate (84-66-2)	625	1.9	7.6
Dimethyl phthalate (131-11-3)	625	1.6	6.4
Di-n-butyl phthalate (84-74-2)	625	0.5	1.0
2,4-dinitrotoluene (121-14-2)	609/625	0.2	0.4
2,6-dinitrotoluene (606-20-2)	609/625	0.2	0.4
Di-n-octyl phthalate (117-84-0)	625	0.3	0.6
1,2-Diphenylhydrazine (<i>as Azobenzene</i>) (122-66-7)	1625B	5.0	20
Fluoranthene (206-44-0)	625	0.3	0.6
Fluorene (86-73-7)	625	0.3	0.6
Hexachlorobenzene (118-74-1)	612/625	0.3	0.6
Hexachlorobutadiene (87-68-3)	625	0.5	1.0
Hexachlorocyclopentadiene (77-47-4)	1625B/625	0.5	1.0
Hexachloroethane (67-72-1)	625	0.5	1.0
Indeno(1,2,3-cd)Pyrene (193-39-5)	610/625	0.5	1.0
Isophorone (78-59-1)	625	0.5	1.0
3-Methyl cholanthrene (56-49-5)	625	2.0	8.0
Naphthalene (91-20-3)	625	0.3	0.6
Nitrobenzene (98-95-3)	625	0.5	1.0
N-Nitrosodimethylamine (62-75-9)	607/625	2.0	4.0

Pollutant & CAS No. (if available)	Recommended Analytical Protocol	Detection (DL)¹ µg/L unless specified	Quantitation Level (QL)² µg/L unless specified
N-Nitrosodi-n-propylamine (621-64-7)	607/625	0.5	1.0
N-Nitrosodiphenylamine (86-30-6)	625	0.5	1.0
Perylene (198-55-0)	625	1.9	7.6
Phenanthrene (85-01-8)	625	0.3	0.6
Pyrene (129-00-0)	625	0.3	0.6
1,2,4-Trichlorobenzene (120-82-1)	625	0.3	0.6
PESTICIDES/PCBs			
Aldrin (309-00-2)	608	0.025	0.05
alpha-BHC (319-84-6)	608	0.025	0.05
beta-BHC (319-85-7)	608	0.025	0.05
gamma-BHC (58-89-9)	608	0.025	0.05
delta-BHC (319-86-8)	608	0.025	0.05
Chlordane (57-74-9)	608	0.025	0.05
4,4'-DDT (50-29-3)	608	0.025	0.05
4,4'-DDE (72-55-9)	608	0.025	0.05 ¹⁰
4,4' DDD (72-54-8)	608	0.025	0.05
Dieldrin (60-57-1)	608	0.025	0.05
alpha-Endosulfan (959-98-8)	608	0.025	0.05
beta-Endosulfan (33213-65-9)	608	0.025	0.05
Endosulfan Sulfate (1031-07-8)	608	0.025	0.05
Endrin (72-20-8)	608	0.025	0.05
Endrin Aldehyde (7421-93-4)	608	0.025	0.05
Heptachlor (76-44-8)	608	0.025	0.05
Heptachlor Epoxide (1024-57-3)	608	0.025	0.05
PCB-1242 (53469-21-9)	608	0.25	0.5
PCB-1254 (11097-69-1)	608	0.25	0.5
PCB-1221 (11104-28-2)	608	0.25	0.5
PCB-1232 (11141-16-5)	608	0.25	0.5
PCB-1248 (12672-29-6)	608	0.25	0.5
PCB-1260 (11096-82-5)	608	0.13	0.5
PCB-1016 (12674-11-2)	608	0.13	0.5
Toxaphene (8001-35-2)	608	0.24	0.5

1. Detection level (DL) or detection limit means the minimum concentration of an analyte (substance) that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero as determined by the procedure given in 40 CFR part 136, Appendix B.

2. Quantitation Level (QL) is equivalent to EPA's Minimum Level (ML) which is defined in 40 CFR Part 136 as the minimum level at which the entire GC/MS system must give recognizable mass spectra (background corrected) and acceptable calibration points. These levels were published as proposed in the Federal Register on March 28, 1997.